

THE GENITALIA OF THE SPECIES PAIR  
*MESAPAMEA SECALIS* (L.) AND  
*MESAPAMEA SECALELLA* REMM,  
(LEP.: NOCTUIDAE)

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These two species were first separated in 1983 by Dr. H. Remm (Remm 1983) in the Estonian SSR of the USSR, on the grounds of the male genitalia. Since then further studies (Fibiger et al. 1984; Agassiz & Goater *pers. comm.*; Jordan 1985) have shown that both species also occur in North Western Europe and Britain, and that separation of the two species on female genitalia may be possible.

The genitalia of these two species have not yet been figured in a British Journal, and this paper seeks to remedy this by describing the main diagnostic characters used to separate *secalis* from *secalella*.

**The genitalia of *Mesapamea secalis* (L.)**

**MALE:** The clavus of this species is narrow and heavily chitinised, with many small thorn like projections (figs. 1 and 6). The aedeagus is curved and when the vesica is everted there is a large, broad cornutus which is joined to the vesica along its entire length. There are also many minute cornuti and an ancillary pouch where the everted vesica turns into a narrow tube (fig. 2).

**FEMALE:** The female genitalia have one major diagnostic character. When viewed from the ventral side the swelling of the ductus bursae faces to the right (fig. 5).

**The genitalia of *Mesapamea secalella* Remm.**

**MALE:** In this species the clavus is broad and only lightly chitinised, with scattered fine setae (figs. 3 and 7). The aedeagus is straighter and the large cornutus on the everted vesica is narrow and only joined to it along part of its length. Where the everted vesica turns into a tube there are many cornuti which are very much larger than those of *secalis* (fig. 4).

**FEMALE:** The distinguishing character is that in this species the swelling of the ductus bursae faces to the left when viewed ventrally (fig. 5).

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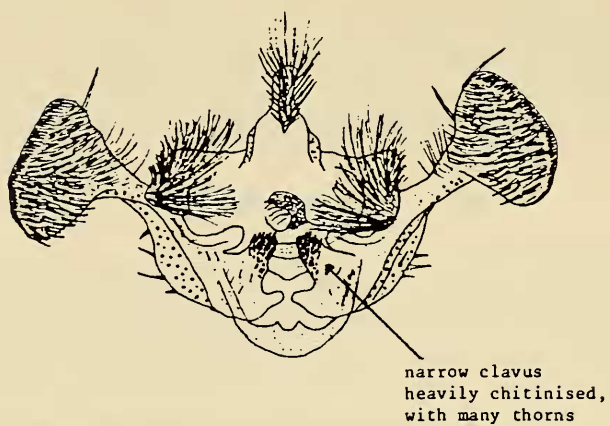


Fig. 1. *Mesapamea secalis*: male genitalia.

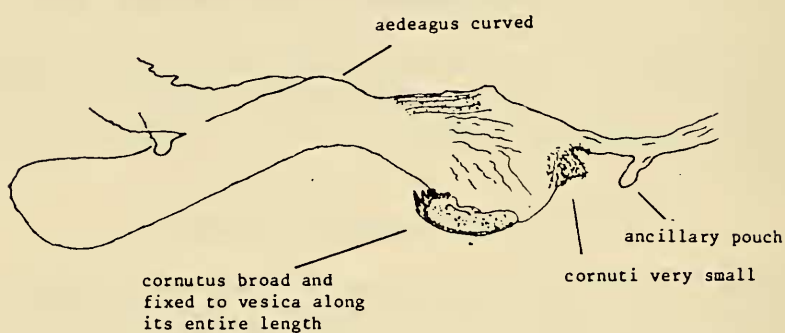


Fig. 2. *Mesapamea secalis*: aedeagus.

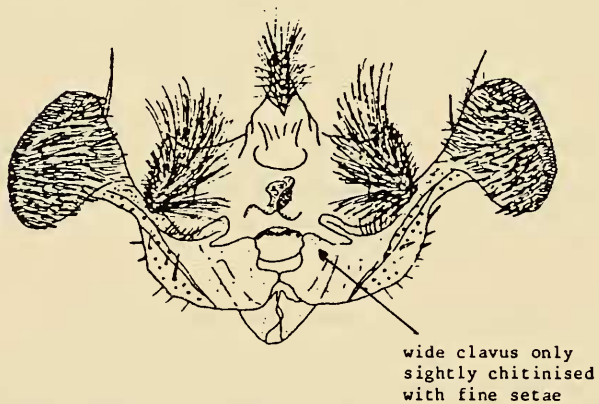


Fig. 3. *Mesapamea secalella*: male genitalia.

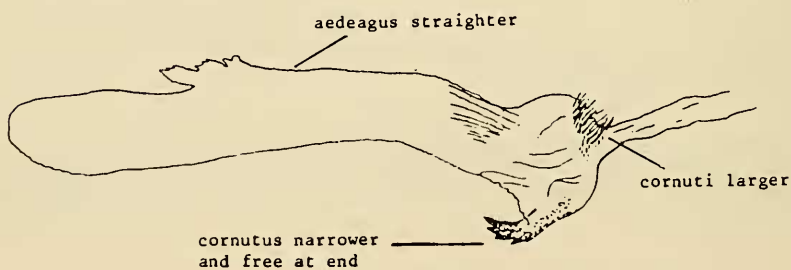


Fig. 4. *Mesapamea secalella*: aedeagus.

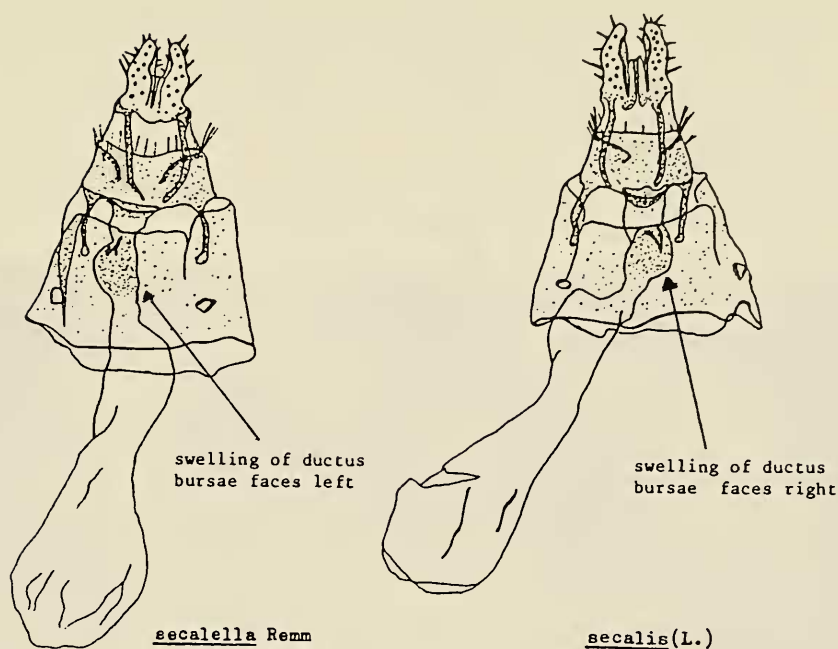


Fig. 5. *Mesapamea secalella* (left) and *secalis* (right): female, genitalia.

It must be stressed that at the present time the male and female genitalia described for each species are only linked by frequency and are not confirmed by captive breeding.

In addition four specimens have been found in which the genitalia conform to neither species, but appear to represent an intermediate of the characters of both species. The exact significance of these specimens will hopefully also be clarified by a captive breeding programme.

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### References

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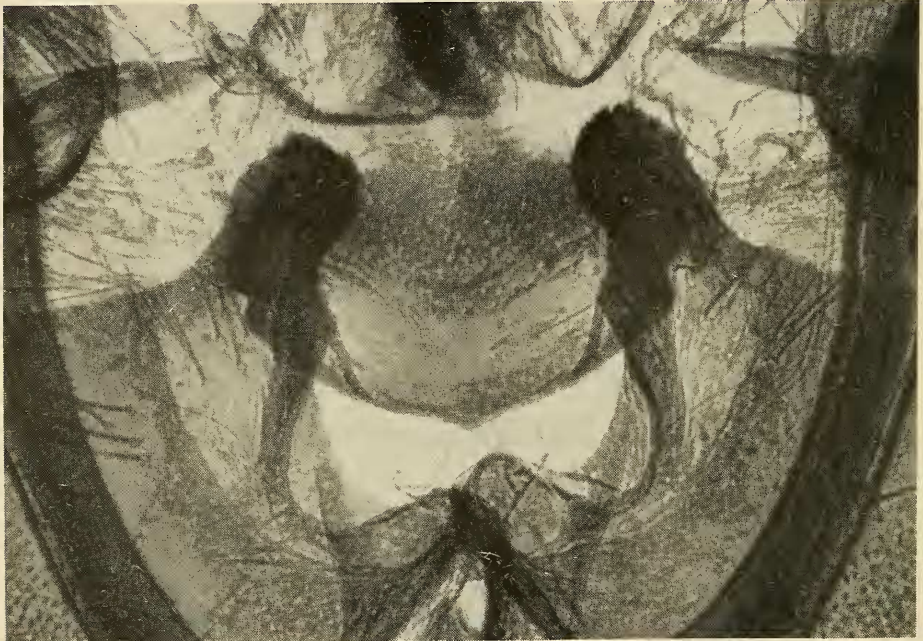


Fig. 6. *Mesapamea secalis*: detail of clavus (photograph D. J. L. Agassiz).

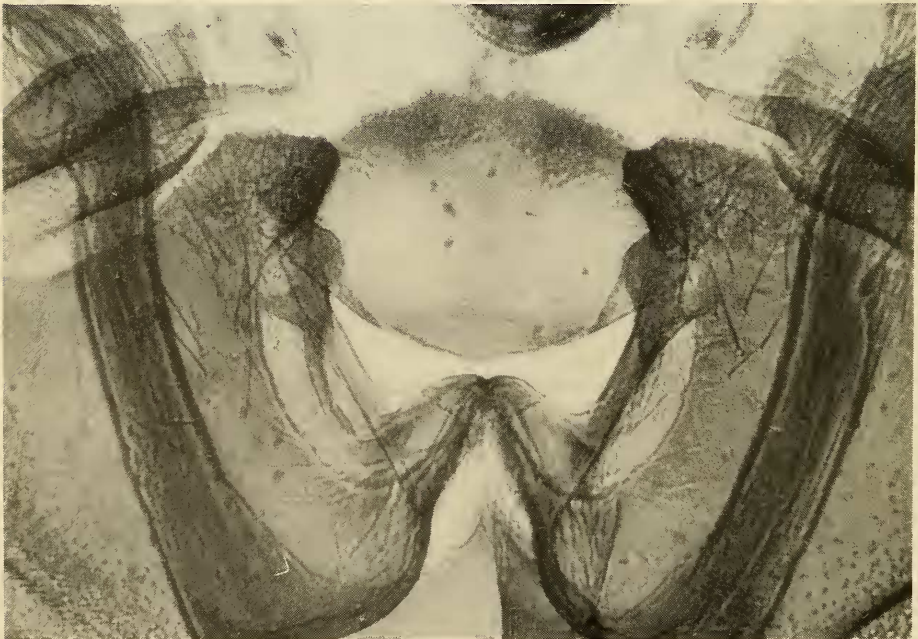


Fig. 7. *Mesapamea secalella*: detail of clavus (photograph D. J. L. Agassiz).